

Modern Challenges in Data Decentralization: Federated Learning, Differential Privacy and Communication Constraints

Workshop Two on Data Privacy
(13–17 July 2026)



ORGANIZING COMMITTEE

Tony Cai
University of Pennsylvania

Yang Feng
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Venue

IMS Executive Seminar Room
Bock S17, Level 3
10 Lower Kent Ridge Rd Singapore 119076

For more information: <https://ims.nus.edu.sg/events/modernchallenges/>

Workshop Two on Data Privacy

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Monday, 13 July 2026

| Time | Title | Speaker |
|-----------|---|---|
| 0840–0900 | Registration | |
| 0900–1000 | The Blessing of Heterogeneity in Federated Reinforcement | Yuejie Chi <i>Yale University, USA</i> |
| 1000–1030 | <i>Coffee Break</i> | |
| 1030–1130 | Permutation Testing under Local Differential Privacy | Tom Berrett <i>University of Warwick, UK</i> |
| 1130–1400 | <i>Lunch Break</i> | |
| 1400–1500 | NetPTR: Optimal Differentially Private Spectral Community Detection | Wanjie Wang <i>National University of Singapore, Singapore</i> |
| 1500–1530 | <i>Coffee Break</i> | |
| 1530–1630 | When Averaging Fails: Statistical Structure in Federated Learning | Qiong Zhang <i>Renmin University of China, China</i> |

Tuesday, 14 July 2026

| Time | Title | Speaker |
|-----------|---|---|
| 0845–0900 | Registration | |
| 0900–1000 | SMART Fine-tuning Factor Augmented Neural Lasso | Jianqing Fan <i>Princeton University, USA</i> |
| 1000–1030 | <i>Group Photo & Coffee Break</i> | |
| 1030–1130 | Federated Learning for Functional Mean Estimation: Optimality under Distributed Privacy Constraints | Tony Cai <i>University of Pennsylvania, USA</i> |
| 1130–1400 | <i>Lunch Break</i> | |
| 1400–1500 | Learning, Approximation and Control | Qianxiao Li <i>National University of Singapore, Singapore</i> |
| 1500–1530 | <i>Coffee Break</i> | |
| 1530–1630 | Optimal Estimation, Adaptation and Inference for Linear Functionals under Differential Privacy | Lasse Vuursteen <i>Duke University, USA</i> |
| 1800 | Conference Dinner Location: TBA | |

| Wednesday, 15 July 2026 | | |
|-------------------------|--|---|
| Time | Title | Speaker |
| 0845-0900 | Registration | |
| 0900-1000 | Muon Outperforms Adam in Tail-End Associative Memory Learning | Vincent Tan <i>National University of Singapore, Singapore</i> |
| 1000-1030 | <i>Coffee Break</i> | |
| 1030-1130 | Quantized Signal Recovery at Optimal Rates | Ming Yuan <i>Columbia University, USA</i> |
| 1130-1330 | Lunch Break | |
| 1600-1800 | <u>Group Outing to TBA</u> 1-way transfer is provided departing from Park Avenue Rochester. | |

| Thursday, 16 July 2026 | | |
|------------------------|--|--|
| Time | Title | Speaker |
| 0845-0900 | Registration | |
| 0900-1000 | Locally Private Estimation with Public Features | Yuheng Ma <i>East China Normal University, China</i> |
| 1000-1030 | <i>Coffee Break</i> | |
| 1030-1130 | Understanding Partial Transfer in CNNs via Kronecker Product Regression | Junhui Wang <i>Chinese University of Hong Kong, Hong Kong SAR</i> |
| 1130-1400 | <i>Lunch Break</i> | |
| 1400-1500 | Inference for General Linear Functionals in High-Dimensional Sparse Regression | Dongming Huang <i>National University of Singapore, Singapore</i> |
| 1500-1530 | <i>Coffee Break</i> | |
| 1530-1630 | Contextual Dynamic Pricing: Algorithms, Optimality, and Local Differential Privacy Constraints | Feiyu Jiang <i>Fudan University, China</i> |

| Friday, 17 July 2026 | | |
|----------------------|---|--|
| Time | Title | Speaker |
| 0845–0900 | Registration | |
| 0900–1000 | Robust Multilayer Networks Estimation under Batch Contamination | Yi Yu <i>University of Warwick, UK</i> |
| 1000–1030 | <i>Coffee Break</i> | |
| Short Talk | | |
| 1030–1100 | | Paul Rognon-Vael <i>Bocconi University, Italy</i> |
| 1100–1130 | | Tao Shen <i>National University of Singapore, Singapore</i> |
| 1130–1400 | <i>Lunch Break</i> | |
| 1400–1500 | Anti-Concentration Inequalities for the Difference of Maxima of Gaussian Random Vectors | Shuting Shen <i>National University of Singapore, Singapore</i> |
| 1500–1530 | <i>Coffee Break</i> | |
| 1530–1630 | Statistical Inference for Decentralized Federated Learning | Jia Gu <i>Zhejiang University, China</i> |

This schedule is accurate as of 01 Jul 2026 and is subjected to changes.